PART 1 - SECTION C

DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

PART 1 - SECTION C

DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

C 1.0 GENERAL

C 1.1 INTRODUCTION

This Statement of Work (SOW) sets forth the requirements for the National Airspace System (NAS) Implementation Support Contract (NISC) follow-on contract that will provide continued support for transition, integration, and implementation of selected Federal Aviation Administration's (FAA) Facilities and Equipment (F&E) programs identified within the Aviation System Capital Investment Plan (CIP). The NISC follow-on contract (NISC-II) will be broad in scope and shall provide critical technical and planning assistance to a wide range of FAA organizations within thirteen functional areas addressed in sections C 3.1 through C 3.13. These functional areas represent a diverse set of work activities, which require a broad range of labor categories and skill levels within each labor category. The work to be performed will be accomplished at the FAA headquarters, regional offices, aeronautical center, technical center and other specific field sites within the United States; including its possessions and territories, the District of Columbia, and Puerto Rico, as specifically designated within individual task orders to be issued after contract award.

C 1.2 BACKGROUND

The CIP delineates improvements in operational facilities and equipment that are planned for implementation within the NAS through the end of the 20th century and well into the 21st century. Further, it provides a description of the specific facilities, systems, subsystems, and schedules that are in progress, or are being planned, for NAS system expansion or to replace current systems. The CIP includes air traffic control computer and display systems; decision support tools; flight service systems; ground to air systems (surveillance, navigation, landing aids, weather, and communications); interfacility systems; facilities (physical plant); and maintenance and operations support systems. The CIP aggregates and describes the projects needed to achieve the overall mission of the FAA and serves as the basis for upgrade of the NAS. The CIP also provides the basis for scheduling F&E project installations, which drives the transition, integration and implementation schedule for NISC work efforts. The CIP further recognizes that support and upgrade of the numerous NAS systems and facilities is a continuing process rather than a singular effort culminating in a final end state. The CIP was first issued in 1990, and will be updated annually to reflect progress toward established goals, make any necessary adjustments in schedules, and to reflect changes in direction or emphasis.

FAA headquarters and regional personnel are responsible for assuring that the transition, integration and implementation efforts of CIP programs are properly executed. While certain new systems and equipment will be installed by the equipment manufacturers on a turnkey basis, a large amount of work will be accomplished by FAA headquarters and regional personnel.

The work to be performed under this contract shall be in accordance with this SOW and individual task orders. A key element in any task order contract is the Contractor's management of work efforts. Effective management and integration of all work efforts, performed by all contractors (both prime and sub) assigned work under this contract, is considered essential for the proper execution of performance under this contract. The general requirements for the overall management of this contract are described in Section C 3.13 of this SOW and may be further delineated and enhanced within individual task orders.

C 2.0 SCOPE

C 2.1 GENERAL

Unless otherwise directed by this contract or within an individual task order, the Contractor shall provide all necessary personnel, services, management, administration, facilities, and other equipment necessary to perform work efforts as directed within task orders issued within any of the functional areas discussed in this section. The Contractor shall provide support to FAA headquarters, nine FAA regional organizations, the FAA Aeronautical Center, the FAA Technical Center, and a variety of other FAA field activities and organizations. The Contractor shall provide assistance to the FAA throughout the life of this contract and be prepared to supply a broad range of labor classifications, as well as skill levels within each classification, to address complex issues and problems for varying periods of time and often under time-sensitive response constraints. Support services offered by Contractor personnel must provide depth, breadth, and quality. Depth is required to accommodate unexpected surges in requirements, breadth to respond to a wide range of needed skills at multiple locations throughout the United States, and quality to assure the best possible results are achieved in any given work effort. Quality requirements further dictate that the Contractor possess the requisite experience levels and past performance history, as well as the ability to acquire and manage personnel resources so as to provide the highest possible levels of quality.

It is important to note that while the NISC-II SOW is comprised of functional work areas, it is anticipated that individual task orders issued under the NISC-II will be in support of specific FAA organizational entities or customers. Therefore, it is probable that many of the task orders for NISC-II will draw from work efforts within several of the functional work areas designed to support NISC customer organizations.

It is also important to note that current individual customers include FAA Airway Facility Services (AAF), both headquarters and regional organizations, as well as other FAA organizations such as Air Traffic Service (AAT), Aeronautical Center (AMC), Research and Acquisitions (ARA), and Air Traffic System Requirements Services (ARS). Future agency reorganizations, however, could well impact the task order structure under NISC-II. In fact, mitigating the impact of reorganization is one reason why the NISC-II SOW has been restructured so that under NISC-II, regardless of organizational makeup, customers will order work efforts as needed from within and across a series of generic functional work areas.

C 2.2 REQUIREMENTS

Except as indicated by Section H, Clause H.24 GOVERNMENT FURNISHED PROPERTY, the Contractor shall furnish and make available all of the necessary professional, technical, administrative, and management services, as well as materials, tools, computer equipment, office equipment, data, and other facilities necessary to accomplish NISC-II requirements set forth in this SOW. Certain purchases (based on a dollar value criteria – see H.17 of this contract) require pre-approval prior to purchase. The NISC-II contract is intended to be used for the purchase of services, and not for purchase of material, equipment, or hardware. When items are to be purchased, the material should be in direct support of administration or performance/accomplishment of task orders under the NISC-II contract by the FAA Associate Technical Officers (ATO's) or NISC-II employees. The requirements within each functional area, as addressed in Section C, shall be ordered using task orders. The task order process to be used to order work efforts is described in Section G, Clause G.7 TASK ORDER PROCEDURES (ORDERING), and the NISC Program Management Guide.

The Contractor shall support the FAA by providing services as defined in this SOW and shall ensure that services provided reflect quality workmanship and are delivered in a timely manner. The following are the thirteen functional areas under which work efforts are to be performed:

1 Implementation and Integration Support
2. In-Service Review and Independent Operational Test and Evaluation Support
3. Transition Support
4. Strategic & Operational Planning Support
5. Engineering Support
6. Environmental Support
7. Air Traffic Systems Requirements Support

8. Configuration Management Support
9. Spectrum Analysis Support
10. Training Assistance Support
11. Automation Support
12. F&E Program Support
13. Management Services Support

C 3.0 FUNCTIONAL WORK AREAS

The above listed functional work areas have been developed from both NISC-I experience and requirement assessments obtained from FAA field and headquarters' organizations. Each functional area contains major sub-areas, if appropriate, as well as examples of the type of work efforts anticipated within each area. It should be noted that the examples provided are representative only and do not necessarily indicate an all inclusive listing of the work efforts that may be required within each functional work area under individually issued task orders.

C 3.1 IMPLEMENTATION & INTEGRATION PLANNING

The Contractor shall assist in the general implementation planning and operational integration of all systems, components, and equipment, as requested, in support of NAS modernization. For purposes of this statement of work, implementation is defined as those activities involved with the planning, organizing, and execution methodologies required in deploying a product into a facility type. Integration is defined as those activities involved with the planning, organizing, and execution methodologies required in merging a new system, component, or equipment into the NAS system.

The following depicts representative examples of the types of work efforts that may be required within the functional area of implementation and integration planning, but is not intended to be all inclusive. Additional types of work efforts may be called out within the scope of this functional area within individually issued task orders.

- assist in the development of site implementation plans for CIP products at various sites
- participate in system verification/acceptance testing at various sites
- support development of operational procedures for new CIP systems
- assist in site planning for system site surveys and resolution of action items leading to fully prepared sites
- review, assess, verify, and develop national program/project implementation and integration strategies and plans for various F&E modernization projects.
- participate in program/project review and technical interchange meetings, conduct independent and interdependent studies to identify, assess, and resolve issues and problems involving implementation & integration of systems and equipment into the operational environment.
- identify and track implementation and transition issues.
- assist in the coordination and planning required to adapt, install and maintain various programs/projects.
- assist in the preparation of generic Site Implementation Plans/Checklists.
- assist in the preparation of generic Post-Award Site Implementation Planning.
- provide workload validation needs; restoration response levels; alignment of Facility Services Equipment Profiles (FSEP), Regional Tracking Program (RTP), and Material Data Forecasting Module (MDFM); workload information system (WIS), and facilities codes and definitions.
- assist in evaluating implementation impacts on operational NAS system's environments.
- assist in developing project timelines (showing critical phases) and identify critical facility needs.
- provide support and expertise in the management and control of Air Traffic sponsored capital investment initiatives and maintain a CIP operational needs database.
- assist in the definition, quantification, rationale, and justification of capital investment initiatives (including military and non-FAA needs).
- participate in the refinement of operational inventory and air traffic architecture.
- assess the operational impact of NAS system changes involving automation, communications, surveillance, navigation and landing systems programs.

- conduct studies for the integration of maintenance automation systems into the NAS.
- assist in developing general/generic site preparation engineering packages.
- assist in deployment risk analyses and assessments for NAS projects.
- identify and report interdependencies among active and future CIP, operations, and R&D programs.
- assist in developing and disseminating implementation/integration information to the regions providing updates to current activities, items of interest, etc.
- analyze CIP projects and streamlining initiatives and determine impact on field facilities.
- develop case files and tracking systems to track the configuration management process to ensure compliance with national and regional configuration control decisions (CCDs).
- assist in the development, coordination, review and publishing of Program/Project Implementation Plans (PIP) and General Site Implementation Plans (GSIP).
- identify, define, and establish a methodology to analyze, quantify, evaluate, and assess impacts and risks associated with deployment of NAS equipment.
- assist in the planning, review, coordination, and implementation of Airport Improvement Plan (AIP) projects.
- review regional shutdown schedule reports and revise RTP databases.
- familiarize FAA HQ, regions and the field with new implementation and transition processes and policies.
- ensure that FAA strategic and operational plans are consistent with implementation and transition policy.
- assist in telecommunications planning and coordination of tasks in support of F&E and CIP programs.

Within the implementation and integration functional work area, the Contractor may also be called upon to support the NAS Implementation Issue (NASII) process. This involves work efforts such as, but not limited to, the following:

- review issues relating to various engineering disciplines for technical content and procedural adherence.
- coordinate issues with the submitter, present issues to the NAS Implementation Issue Committee (NIIC), and coordinate and track the plan of action and resolution process.
- provide status and database management support and update the issue status log.
- prepare NIIC meeting agenda documentation, status logs, most recent meeting minutes, current issue data sheets, new issue reports, proposed current issue closure forms, and meeting minutes.
- assist in the tracking, resolution, and elevation of implementation issues as necessary.

C 3.2 IN-SERVICE REVIEW & INDEPENDENT OPERATIONAL TEST AND EVALUATION SUPPORT

Within this functional work area, the Contractor shall provide technical expertise, assistance, and support to both the In-Service Quality Assurance (ISQA) and the Independent Operational Test and Evaluation (IOT&E) processes. The following represent examples of the type of work efforts that may be required within this functional work but are not intended to be all-inclusive. Additional types of work efforts may be called out within the scope of ISQA and IOT&E support within individually issued task orders.

In response to a task order within this functional work area, the Contractor may be called upon to perform representative work efforts as follows:

- maintain and update ISQA and IOT&E databases.
- assist in the planning, preparation, and distribution of IOT&E plans, plan updates and schedules.
- assist in formulating and coordinating timely responses to correspondence and documentation regarding IOT&E activities.
- assist in the development of test plans, issue papers and proposed solutions.
- assist in the development of cost estimates for IOT&E activities.
- support the ISQA World Wide Web home page and related documentation.
- prepare ISQA status sheets and position papers.
- develop and maintain ISQA checklists and schedules.
- prepare ISQA reports.
- monitor system test activities of CIP programs.

C 3.3 TRANSITION PLANNING

The Contractor shall provide assistance with the preparation, monitoring, and implementation of NAS transition planning efforts involving all systems, components, and equipment, as requested, in support of CIP/NAS modernization efforts in FAA headquarters and regional facilities and locations. For purposes of this statement of work, transition is defined as those activities involved with the planning, organizing, and execution methodologies required in deploying many different products into a facility type over an extended period of time. The following list depicts representative examples of the types of work efforts that may be required within the functional area of transition planning, but is not intended to be all-inclusive. Additional types of work efforts may be called out in the functional area of transition planning within individually issued task orders.

- assist in the study and development of various transition plans involving FAA facilities and prepare briefings and status reports.
- provide technical expertise, technical writings, and technical editing in the preparation of staff studies and transition plans.
- assist in organizing, scheduling, and conducting NAS transition plan briefings.
- assist in developing documentation and disseminating information used in the management and consolidation of transition activities.
- familiarize FAA HQ, regions and the field with new transition processes and policies.
- review, monitor, and recommend appropriate transition processes and tools required for NAS transition.
- review, reproduce, and disseminate transition plans and other transition documents.
- assist in the development and evaluation of platform operations, integration strategies, and transition concepts and plans.
- assist in the development of NAS Transition Analysis Reports.
- provide transition review to regional management.
- conduct independent and interdependent studies to identify, assess, and propose resolution to existing or potential issues and problems regarding operational transition impacts.
- conduct generic site surveys of platform facilities to determine facility layout and configuration and report survey results.
- ensure that FAA strategic and operational plans are consistent with transition policy.
- assist in the preparation of facility baseline and transition drawings.
- review and evaluate PIPs, SIPs, transition, testing, certification, and activation of plans, procedures, and schedules
- identify and report on conflicts, problems, and issues concerning physical space, material, and service requirements for each equipment contractor.
- assist in physical space planning activities and development of Space Management Plans for various facilities.
- review specifications and designs to ensure compliance with NAS transition plans.
- assist in coordinating and integrating regional transition needs into a national transition plan.
- provide air traffic technical support to FAA personnel in the development of plans and procedures to ensure a safe and orderly transition from old to new ATC equipment.
- assist in the preparation, monitoring and implementation of transition plan schedules and requirements for NAS/CIP Air Traffic Systems sorted by region/location/facility.
- coordinate and facilitate activities associated with the Annual F&E Work Plan .
- assess Work Plan priorities to determine impact on transition activities.
- assist in workload planning and analysis; scheduling, networking, and coordination of the Material Delivery Forecast Module (MDFM) and Regional Tracking Program (RTP), using ARTEMIS, Microsoft Project or other project scheduling software.
- assist in telecommunications transition planning and coordination.

Additionally, the Contractor shall provide support and assistance regarding human resource aspects of the transition process for NAS modernization programs. The following are representative of the type of work

efforts that can be expected within this functional area, however, they are not all inclusive. The exact work efforts required will be identified in the individual task orders issued after contract award.

- conduct studies to determine staffing level impacts as a result of new NAS systems.
- assist in developing work force models for the Staffing Standards Analysis System (SSAS)
- assist in training and instructing regional Airway Facility (AF) and Air Traffic (AT) staffing standard specialists on the latest techniques for "what if" analyses of workload requirements under alternative future NAS scenarios.
- assist in developing and maintaining a human resource requirements database.
- analyze human factor studies and assess impacts on CIP transition.

Furthermore, the Contractor may be called upon to provide general transition support which may include, but not be limited to: providing assistance to the Platform Business Manager in the development of platform business tools, support of Facility Transition Plan meetings, providing of presentation and conference support, providing administrative support for meetings, briefings, and telephonic conference calls, and maintaining the NAS documentation library database.

C 3.4 STRATEGIC AND OPERATIONAL PLANNING

The Contractor shall provide planning, scheduling, and coordination support for a variety of strategic and operational planning functions within the FAA including the Government Performance and Results Act and the Business Process Engineering Act. In addition, the Contractor shall provide assistance and expertise to assist in developing and maintaining a system that provides configuration management to strategic planning iterations. The following list depicts representative examples of the types of work efforts that may be required within the functional area of strategic planning, but is not intended to be all inclusive. Additional types of work efforts may be called out within the scope of strategic planning within individually issued task orders.

- assist in the planning, preparation, and publicizing of Strategic Plans and plan updates.
- assist in the development and maintenance of a Strategic Plan milestone tracking system; monitor and report on milestone progress/accomplishments.
- assist in developing and updating strategic planning activities that address new facilities and technologies.
- assist in the development and update of communications strategic plans that address network plans for communications, consolidation of major ATC facilities, new facilities, new technologies, the increase in radio frequency spectrum, human resource requirements, and logistics.
- participate in the strategic planning process involved in determining joint use (primarily DOD/FAA) objectives and development.
- assist in telecommunications strategic planning and task development.

The Contractor may also be asked to provide subject matter expertise in the areas of organizational development and cultural change. Additionally, the Contractor may be required to provide general support for strategic and operational planning efforts such as: assisting in the development, publishing, and distributing of meeting agenda, minutes, discussion items, issues, instructions to chartered work groups, and decisions resulting from strategic planning meetings; the development of presentation materials for reorganization, empowerment, culture, and various other initiatives which may include the production of videos, newsletters, hotline voice mailboxes, and employee bulletin boards; and providing logistics support for multimedia, office administration, and telecommunications equipment.

C 3.5 ENGINEERING SUPPORT

The Contractor shall provide a variety of technical engineering expertise and assistance involving the implementation, integration, and transition of NAS modernization systems, components, and equipment. Support will include engineering design, design review, scheduling and installation oversight for various program/project areas both in the U.S. and in international areas (e.g. oceanic, tri-lateral, etc.) to include structures, roads, and communications as well as systems, components and equipment. A variety of engineering disciplines will be required to include civil, electrical, electronics, environmental, mechanical,

systems, and more. The following represent examples of types of work efforts that may be required within this functional area, and are not intended to be all-inclusive. Additional types of work efforts may be called out within the scope of engineering support through individually issued task orders.

- maintain/update general facility documentation (e.g. engineering drawings, specifications, & interface flow diagrams).
- assist in formulating and coordinating timely responses to correspondence and documentation regarding engineering packages.
- update RTP databases.
- conduct field trips to perform engineering studies as necessary.
- assist in the preparation of engineering packages and drawings, ordering of telecommunication services, preparation of Facility Reference Data Files, ordering Government Furnished Material, assisting with conducting Joint Acceptance & Inspection (JAIs), providing technical support to field activities, reviewing as-built drawings, and assisting with clearing JAI exceptions.
- assist in the preparation of one-line power service drawings of FAA facilities.
- conduct analysis of electrical distribution systems and report findings.
- conduct studies supporting the acquisition of power system analysis and diagnostic tools.
- conduct evaluations of equipment degradation analysis and reliability studies.
- conduct computer modeling and simulation studies of power systems.
- assist with cable management plan development and documentation.
- establish and maintain the site-specific database and validate the configuration.
- assist in development of project implementation engineering packages to support the relocation/installation of NAS equipment for training, test, and field engineering support facilities.
- provide expertise in support of Fiber Optics and Fiber Optics Transmission Systems (FOTS).
- support the Data Multiplexing Network (DMN) enhancements; such as automatic switching, dual remoting, and automatic rerouting of data.
- provide support for Telecommunications Maintenance & Operations (TM&O) projects.
- provide engineering support for the development of the prototype operational control center (POCC) and the operational control center (OCC).
- assist in development of NAS communications system infrastructure transition and master plans; document the regional data communication networks.
- provide engineering support for the continuing development, design, installation, operation, enhancement, and daily network management of the facility's communications backbone system; this also includes the Fiber Data Distribution Interface (FDDI).

The Contractor shall also be prepared to provide a variety of on-site engineering support to FAA customers as requested within individual task orders. The following list depicts representative examples of the types of work efforts that may be required within on-site engineering support, but is not intended to be all-inclusive. Additional types of work efforts may be called out within the broad scope of on-site engineering support.

- provide assistance to NAS second level engineering support functions.
- provide engineering support both at the facility level and to the FAA Operational Support (AOS-200) activity.
- provide generic engineering support for equipment integration and project closeout activities.
- provide testing and problem resolution for various project sites.
- provide technical support in project management and document control.
- participate in human factor analysis studies.
- maintain logistics databases, inventory records, shipping & receiving documents, property documentation and accountability, transportation records, and disposal records.
- research catalog information from vendors regarding material and equipment issues.
- provide and maintain project closeout folders.

The Contractor shall also be prepared to provide engineering assistance in the form of Contractor participation in areas such as briefing preparation, studies, project transmittals, project close-out, documentation, and check

out and testing. Other general support functions may include the generation of reports and briefings in support of equipment deliveries, installation status, facility training, JAI, Contractor Acceptance Inspection (CAI), Initial Operating Capability (IOC), Operational Readiness Demonstrations (ORD), and commissioning/decommissioning dates.

C 3.6 ENVIRONMENTAL SUPPORT

The Contractor shall provide assistance to the FAA in this functional work area by supplying environmental engineering expertise and by providing technical assistance for environmental issues such as the identification of hazardous waste, substances and materials as defined by Federal, state and local environmental, health, and safety laws (hereafter referred to as hazardous material), planning for the proper generation, use, reuse, storage, disposal and handling of hazardous material in accordance with FAA Orders and directions, including FAA regional orders and directions, (hereafter also referred to as FAA Orders), and in accordance with Federal, state, and local environmental, health, and safety laws (hereafter also referred to as applicable law), and ensuring compliance with applicable law. Assistance may also be requested in the analysis of the environmental impact of NAS modernization projects and for ensuring that all applicable OSHA and agency personnel safety requirements are met.

In response to a task order within this functional area, the Contractor shall perform the following:

- Ensure that all work activity associated with the preparation and drafting of FAA documents, including but not limited to, Environmental Due Diligence Audits (EDDA), Environmental Impact Statements (EIS), Environmental Assessments (EA), and Categorical Exclusion Statements, is fully coordinated with FAA personnel responsible for directly overseeing the preparation and drafting of said documents including FAA environmental engineering personnel.
- Ensure that all reference material (including studies, reports, site visit notes, data, letters, records of call, records of visit, statistical information, etc.) relied upon in preparing FAA documents are properly cited in the text and appendices of these FAA documents, and copies provided to the FAA.
- Ensure that a thorough research of issues to be addressed in the preparation and drafting of FAA documents includes written coordination with groups, agencies or governmental bodies (federal, state and local) potentially impacted or who have regulatory authority oversight, and ensure that a thorough research of issues includes the preparation and gathering of reference material to support any determinations and conclusions made in these FAA documents (including studies, reports, site visit notes, data, letters, records of call, records of visit, statistical information, etc.).
- Ensure that Contractor employees involved in the preparation and drafting of FAA documents, including but not limited to an EIS, EA, EDDA, and Categorical Exclusion Statement, have received prior training in the proper preparation and drafting of these documents, and provide written certification evidencing the completion of said training to the FAA personnel directly responsible for overseeing the preparation and drafting of these FAA documents.

The Contractor shall comply with applicable FAA Orders and directions (including FAA regional orders and directions), and applicable Federal, state, and local environmental, health, and safety laws, while the Contractor and any subcontractors are performing any work activities, including the generation, use, reuse, storage, disposal, and handling of any hazardous material.

Before the Contractor and any subcontractors perform any work activities involving, or potentially involving, the generation, use, reuse, storage, disposal or handling of any hazardous material, the Contractor shall become familiar with applicable FAA Orders and directions (including FAA regional orders and directions), and applicable Federal, state, and local environmental, health, and safety laws which apply to work activities to be performed.

The Contractor shall report in writing, to the FAA personnel directly responsible for overseeing said work activity, any known abuses, damages, spillage, hazards, or dangers (hereafter referred to as incident) that have occurred or are occurring at any work activity sites.

The following list depicts representative examples of the types of work efforts that may be required within this functional area, but is not intended to be all-inclusive. Additional types of work efforts may be called out within the scope of environmental support within individually issued task orders.

- Assist in the preparation and drafting of National Environmental Policy Act (NEPA) Environmental Impact Statements (EIS) and Environmental Assessments (EA) in compliance with applicable law and FAA Orders as part of the preliminary planning process.
- Assist in the preparation and drafting of Environmental Due Diligence Audits (EDDA) in compliance with applicable law and FAA Orders, including, but not limited to, FAA Order 1050.19.
- Assist in the preparation and drafting of Categorical Exclusion Statements where the FAA has determined that an EIS or EA is not required, in accordance with applicable law and FAA Orders.
- Assist in the performance of Occupational and Environmental Hygiene and Safety (OEHS) training, studies, monitoring, sampling, inventory and review of documents and engineering packages.
- Provide support to the Regional Program Manager for Environment and Safety (RPMES) and the Regional Safety and Health Manager (RSHM), including but not limited to, assistance in the preparation and drafting of status reports, Operation and Maintenance (O&M) planning, and monthly reports.
- Assist in the development, drafting and implementation of mitigation plans for all FAA facilities to correct areas where the FAA is in noncompliance with, and to ensure compliance with, occupational health and safety regulations and FAA Orders, including but not limited to Federal Occupational Safety and Health Administration (OSHA) regulatory requirements and FAA Order 1050.17.
- Serve as coordinator for safety and asbestos programs, and develop, schedule and coordinate safety related training in accordance with applicable law and FAA Orders, including, but not limited to, FAA Order 1050.17.
- Conduct field trips to perform safety and occupational hygiene employee workplace inspections in accordance with applicable law and FAA Orders, and maintain databases to track these inspections.
- Assist the Environmental Compliance and Employee Safety Team in defining, recommending, reviewing, and assessing FAA environmental compliance, employee safety and hazardous materials policies, and goals and objectives.
- Provide technical planning, assessment, and implementation assistance for programs having critical environmental compliance needs and/or employee safety considerations as determined by FAA personnel directly responsible for overseeing these programs.
- Assist in the development, revision, and dissemination of technical and engineering documentation and information used in planning and managing environmental and safety activities such as the integrated Program Management Plan (PMP) and the PIP.
- Participate on national teams, committees, and groups providing suggestions for environmental/OSHA analysis and strategies.
- Assist in developing, drafting and implementing contingency plans for unusual circumstances and/or environmental emergencies as directed by FAA personnel directly responsible for overseeing these circumstances and/or emergencies.
- Provide support and analysis in the implementation of the Fuel Storage Tank (FST) Program.
- Provide technical and engineering data support assistance (including research identifying statutory and regulatory applicability and scientific or statistical data) for the preparation and revision of FAA orders, notices, and letters on environmental and occupational safety and health issues.
- Assist in the planning, drafting, and implementation of an inspection schedule for annual inspections of high-risk facilities, biannual inspections of moderate risk facilities, and inspections as deemed necessary by the FAA for low risk facilities.
- Assist in the assessment of noise impacts as a result of changing AT procedures, sector alignments and new and/or revised landing areas.

C 3.7 AIR TRAFFIC SYSTEMS REQUIREMENTS SUPPORT

Within this functional work area, the Contractor shall be called upon to provide support, guidance, and specialized expertise in a variety of program support arenas to include technical, engineering, program management, human resources, logistics, and administration.

More specifically, the Contractor shall be required to assist in a variety of functions that include life cycle management, operational research analysis, integrated logistics support, and cost performance as described in greater detail below.

The Contractor shall be required to provide support in the area of Life-Cycle Management. Life-Cycle Management for the purposes of this contract is defined as all evolutions involving a program or project from the commencement of solution implementation until the end of the service life decision phase. Representative types of work efforts are described below. However, these areas are not to be construed as all-inclusive. Actual work efforts to be performed within this functional work area will be identified within individual task orders issued by the FAA.

- prepare operational and F&E impact assessments, assist in developing plans to obtain surplus equipment and property, and prepare operational plans for the assumption of former military airspace.
- provide input for Memorandums of Agreement between FAA and DOD for Radar Approach Control (RAPCON) consolidation and transfer of DOD Air Traffic Control facilities into the FAA, or vice versa.
- support regional radar activities through the development of regional Radar Network Planning Documents which will include both long and short-term requirements for both civil and military aviation areas.
- provide system-engineering support for planning testing, and oversight of future NAS hardware and software systems.
- assist in the development, monitoring, and tracking of future system requirements.
- assist in the analysis of Air Traffic (AT) procedural changes needed for implementation of new equipment.
- assist in development of hardware and software baseline information across various NAS facilities.
- develop management tools required to track requirements throughout system development, testing, and implementation phases.
- assist in the preparation, coordination and documentation of aviation user-community forums.
- interface with the National Weather Service and the National Oceanographic and Atmospheric Administration (NOAA) to facilitate the coordination, planning and management of aviation weather requirements.
- assist in the development/refinement of the ATS RE&D program to include: 1) participate in the requirements development and prioritization process; 2) interface with all RE&D performers (i.e. AUA, AAR, AND, NASA, MITRE) to establish an ATS RE&D program baseline; 3) track program performance and execution against performance measures.
- assist in developing and/or reviewing life-cycle support policies, procedures, processes and orders.
- research, develop, coordinate, review, and maintain records and correspondence files on life-cycle management policy and documents.
- familiarize FAA headquarters, regions and field with Life-Cycle policies, processes, and procedures.
- support tests, demonstrations, analyses, studies, and trial initiatives to ensure life-cycle interests are adequately addressed.
- perform sensitivity analyses and risk assessment.
- perform life cycle cost estimating and analysis for both in-service and future NAS systems/subsystems.
- assist in the development and implementation of the facility life-cycle management (FLCM) models.

The Contractor shall also be required to provide support in the area of NAS Integrated Logistics Support (NAILS). NAILS for the purpose of this contract is defined as the determination and acquisition of NAS systems and equipment life cycle supportability requirements. Representative types of work are described below. However, these are not to be construed as all-inclusive. Actual work to be performed within this functional work area will be identified within individual task orders issued by the FAA.

- assist in developing integrated logistics support (ILS) requirements for hardware/software specifications, procurement requests, statements of work, technical aspects of the SIR, and other procurement documents as required.
- provide technical and management support for planning and implementing contract logistics and maintenance support.
- conduct studies to determine required levels of reliability, maintainability, and availability for NAS systems.

- assist in the development and review of Integrated Logistics Support Plans (ILSPs)
- support NAS Integrated Logistics Support (NAILS) Management Team (NAILSMT) meetings.
- provide logistics status input to the Major Acquisition Review (MAR) and ISR process.
- review and perform maintenance and/or logistics engineering analyses of ECPs and NCPs.
- conduct trade-off analyses of new systems and equipment using data from Logistics Support Analysis (LSA), Life-Cycle Cost Analysis (LCCA), Failure Modes Effects and Criticality Analysis (FMECA) and other sources.
- perform reliability, maintainability and availability (RMA) assessments, impacts and trade-off analyses.
- assist in developing operational cost parameters for FAA Logistics Center field support activities, which includes support to local and contract depot level repair activities, as well as direct support to FAA's field maintenance organizations.
- analyze cost versus performance tradeoffs for Contract Maintenance and Logistics Support (CMLS), Contractor Depot Logistics Support (CDLS), Contractor Repair Service (CRS), and FAA in-house support.
- implement the Volpe National Transportation Systems Center (VNTSC) Spares Planning Model (SPM) to Logistics Center applications. Review, validate, and recommend changes to the model.
- identify and support interface requirements between the VNTSC model and existing subsystems.
- update input/output desk procedures for the SPM.
- assist in developing and maintaining a facility indexing methodology, support FAA facilities indexing activities, and support FAA efforts to institutionalize the FLCM model and associated logistics concepts.
- provide analysis of current and projected maintenance concepts
- assist with the development of maintenance plans, including maintenance handbooks.
- assist in developing and maintaining a set of documented maintenance operation requirements and system requirement statements.
- prepare recommendations for Maintenance Requirements Documents (MRDs) for various NAS systems and equipment.
- coordinate, review, comment on, provide technical interchange, and track MRDs from initiation to approval.
- assist in the development of Mission Need Statement (MNS) based on operational and maintenance data.
- conduct studies and provide recommendations for the development of maintenance and operation requirements for towers, terminals, and enroute facilities; includes maintenance systems descriptions of the end-state maintenance and support system.
- review all technical documentation for its impact on maintenance concepts and NAILS plans.
- prepare and maintain databases and charts reflecting maintenance issues for existing and future equipment and systems.
- provide presentation and conference materials, agendas, and minutes for all maintenance automation systems/requirements meetings and telephone conversations.
- assist in development of Remote Maintenance Monitoring (RMM) implementation plans, Maintenance Automation Implementation Plan (MAIP), and Remote Monitoring System (RMS) and Maintenance Control Center (MCC) implementation support.
- assist in developing MCC operation procedures and automation tools application.
- provide support for operations research activities relating to NAS modernization.
- assist in developing requirements for standardizing monitoring and displaying capabilities and future systems such as Remote Maintenance Monitoring/Interim Monitor and Control Systems (RMM/IMCS).
- provide technical support for maintenance automation systems including associated telecommunications.
- support maintenance, operations and management of Maintenance Management System (MMS) software control management system.
- assist in studies and evaluations that provide assistance to non-federal program managers in preparing facilities for integration into the NAS.

The Contractor shall also be called upon to provide cost and performance measurement assistance and expertise as necessary in support of NISC work efforts. The following are representative types of work efforts anticipated, but are not intended to be all-inclusive. Actual work efforts to be performed will be described within individual task orders.

- assist in developing cost and performance measurement capabilities.
- conduct cost-benefit analyses and cost effectiveness studies on related NAS systems.
- support the NAS Infrastructure Management System (NIMS).
- assist in refining Life Cycle Cost estimates.
- assist in refining the National Operation Control Center/Operation Control Center (NOCC/OCC) and telecommunications cost and benefit estimates as a result of the OCC prototype.

C 3.8 CONFIGURATION MANAGEMENT (CM)

Within this functional work area, the Contractor shall provide assistance and expertise involving configuration management control. More specifically, the Contractor shall provide support to the FAA concerning ANF and NAS configuration control board issues and events. While exact work efforts will be described in actual task orders issued after contract award, the following, while not all-inclusive, are representative of the type of work efforts anticipated.

- prepare NAS Change Proposal (NCP) status sheets; briefing sheets/position papers; Configuration Control Board (CCB) summary sheets; and custom reports addressing case files/NCPs/ Configuration Control Decisions (CCDs), standards, and documents.
- assist in conducting audits at regional sites to ensure configuration management policy is being followed.
- maintain liaison with regions providing CM training, monthly video links/telephone conversations, and overall CM guidance.
- assist in the clarification and definition of CM policy; serve as a focal point for CM activities.
- conduct Configuration Baselining efforts at various FAA facilities; prepare minutes, audit reports, and make recommendations.
- establish and maintain a NCP document control center, reference library and database.
- assist in the development, review and/or processing of technical employee suggestions (TES), software revision bulletins (SRB), and related documents.
- provide support for status accounting, configuration auditing/tracking, and coordination of CM activities.
- schedule and coordinate CCB meetings and telephone conversations; prepare agendas, issues, action items, NAS NCPs, and case files.
- assist in facility CM compliance.
- assist in developing and maintaining site configuration databases and equipment delivery schedules for various systems/equipment.

C 3.9 SPECTRUM ENGINEERING/ANALYSIS

The Contractor shall provide technical expertise, general assistance, and support in the performance of spectrum analysis efforts to include, but not be limited to, the preparation and conducting of radio frequency interference investigations, review of frequency assignment requests, various studies, and the conduct of resolution training sessions.

Personnel engaged in this functional work area will be required to have security clearances, including some as high as top secret. The following are representative of the type of work efforts that can be expected within this functional work area, however, they are not all inclusive. Exact work efforts required will be identified in individual task orders issued after contract award.

- process frequency assignment requests.
- conduct spectrum management studies dealing with operational impact to the radio frequency environment involving wideband and narrowband digital and analog systems.
- assist in the National Telecommunications and Information Administration (NTIA) frequency assignment reviews and subcommittee (FAS) agenda.
- review and analyze technical papers, prepare comments and recommendations, assist in developing US positions, participate in meetings, prepare minutes and agendas, and prepare technical papers.
- assist in developing policy and planning guidance for Regional Frequency Management Officers (FMO) for all CIP projects.
- assist in developing and maintaining a spectrum management database.

- apply spectrum-engineering principles to all CIP projects involving the radiation or reception of radio frequency signals.
- maintain up-to-date schedules of activities of groups involved in or impacting on aviation interests with respect to aeronautical radio navigation and mobile communication safety of flight.
- assist in developing reports and test plans; secure resources for test programs.
- analyze the DOD Joint Tactical Information Distribution System (JTIDS) effects on the NAS and provide input.
- evaluate the impact of evolving requirements of the DOD JTIDS upon the NAS to include FAA's Tactical Air Navigation (TACAN), Distance Measuring Equipment (DME), Microwave Landing System (MLS), DME-Precision, Air Traffic Control Radar Beacon (ATCRBS), Mode S, and Traffic Alert and Collision Avoidance System (TCAS).
- analyze DOD's JTIDS frequency assignment requests on the NAS.
- review and coordinate electromagnetic countermeasures (ECM) proposals and make recommendations.

C 3.10 TRAINING ASSISTANCE AND SUPPORT

Within this functional work area, the Contractor shall be called upon to assist in the development, implementation, and execution of various training programs and requirements that support national and regional technical training designed to facilitate NAS modernization. Representative examples of the type of work efforts required are as follows, but are not intended to be all-inclusive. Additional types of work within the general scope of training assistance support may be required under individual task orders.

- provide support services in the determination, management, tracking, and control of training resource development for the integration, implementation, and transition of new equipment and systems.
- research, prepare, and administer technical On-the-Job (OJT) training.
- provide safety-related training to facility personnel.
- assist in the development, maintenance, and periodic update of course materials and training plans.
- maintain a current Training DataBase (TDB) for CIP and other capital projects.
- coordinate new equipment training requirements/allocations.
- review CIP training deliverables and evaluate contract training and content.
- arrange for and schedule Locally Arranged and Conducted Training (LACT) and HAZMAT Letter of Authorization (LOA) courses.
- maintain the AF Electronic Class and Course Schedule (ECCAF), the LACT and the Center for Management Development (CMD) databases on the Local Area Network (LAN).
- create a reference library of supporting documentation that can be incorporated into training plan SOW descriptions, task and skill analysis reports, current training system descriptions, and training assessments.
- assist with the developing of instructional materials for new personnel which summarize organizational structures and work responsibilities, provides an overview of job related activities, and includes references to associated tools and documentation.
- assist in the development and coordination of the Consolidated Personnel Management Information System (CPMIS) training quota distribution and disbursement to the regional level.
- provide training data and information input to the CSR and ISR process.
- review documentation, coordinate, and provide information for training on the use of the Spares Planning Model.
- assist with the development, evaluation, and maintenance of a consolidated training tracking system for FAA headquarters, regional and field personnel.
- assist in developing training requirements, syllabus, and schedules within areas of NAS system changes.
- provide automation support training.

C 3.11 AUTOMATION SUPPORT

Within this functional work area, the Contractor shall be expected to provide automation support as required for a variety of NAS modernization programs and projects. Representative examples of the type of work efforts required under automation support are as follows, but are not intended to be all-inclusive. Additional types of work within the general scope of Automation Support may be required under individual task orders.

C 3.11.1 AIR TRAFFIC SYSTEM SUPPORT

- assist in performing system implementation; provide user support documentation, database management peak load analyses, and network monitoring for Maintenance Management System.
- provide assistance and support for the development, enhancement, maintenance, documentation and testing of existing and proposed operational air traffic control computer systems software.
- maintain a library of Enroute Automated Radar Tracking System (EARTS) documents; including Computer Program Functional Specifications, NAS-MDs, computer program flow charts/diagrams, coding listings, coding patch update files, NCP files and Program Trouble Report (PTR) files.
- produce Computer Program Functional Specifications (CPFS), required software codes, and a library for software documents.
- install and apply FAA provided software for airspace modeling and provide technical assistance and training for the operation of the computer network, development of alternatives, preparation and input of databases for modeling, exercise of models and analysis, and reporting of simulation/modeling results.
- assist in configuring a network of computer hardware to be used in airspace modeling and design.
- assist in developing software that facilitates the implementation of life-cycle management processes.
- assist in the development of the National Local Patch Library (NLPL) requirements, standards, and implementation plan.
- provide support in implementing and maintaining the maintenance management system including the software that monitors the status of equipment.

C 3.11.2 INFORMATION TECHNOLOGY (IT) SUPPORT

Additional types of work within automation support may be required within individual task orders to foster and facilitate FAA's ability to support specific NAS modernization programs and projects. Examples of the types of automation support that may be necessary in order to enhance the FAA's ability to support NAS modernization are provided below, but are not all inclusive. While many of the examples are written from a fairly generic standpoint, they would be invoked within NISC-II task orders in support of specific programs and projects that facilitate NAS/CIP modernization efforts.

- provide expertise as required in the application and management of FAA supplied software in support of NAS modernization.
- assist in the development of user manuals for Government provided software.
- maintain/coordinate the automation equipment inventory program.
- support user access to the LAN including cc: mail.
- support LAN hardware/software configuration/maintenance; perform systems diagnostics and analyze results; and provide technical assistance as necessary.
- assist with the implementation and control of Transfer Control Protocol/Internet Protocol (TCP/IP) addressing and protocols.
- support Internet access and use of the World Wide Web (WWW) server technology by elements of the NAS.
- provide expertise to help ensure integration and connectivity of new IT acquisitions and equipment.
- install, test, implement and evaluate P.C. and Wide Area Network (WAN)/LAN software.
- provide engineering and programming support for the Computer Based Instruction (CBI) system and WAN/LAN activities.
- design database formats and populate, update, and administer databases and other automated tools as requested.
- administer and operate a WAN connection between headquarters LAN and RTP and CAEG regional LAN's.
- provide support and development efforts for present and future office automation software; assist in establishing standards for future automation systems.
- provide support in the form of white papers, technical abstracts, and technical reports, for a variety of operating systems, compilers, and software applications such as, but not limited to, X-windows, C, C++, FORTRAN, UNIX, Windows, Windows NT, drafting, modeling, engineering analysis, and airspace analysis.

- provide documentation support in the form of status reports and briefing papers relative to implementation status and technical evaluations and assessments of implementation alternatives.
- assist in software development and test as required.

C 3.11.3 REGIONAL TRACKING PROGRAM (RTP)

Within the general functional area of automation support, the Contractor shall also be required to support a functional subarea entitled RTP. Within this subarea, the Contractor shall assist in the development and analysis of requirements associated with RTP, a program designed to monitor NAS modernization efforts and project those resources required to implement work efforts. Representative examples of the type of work efforts required are as follows, but are not intended to be all-inclusive. Additional types of work within the general scope of supply and materiel support may also be required under individual task orders.

- research existing data for information to populate the RTP database; input data.
- research, collect, analyze, maintain, and coordinate staffing needs; including Facility, Service and Equipment Profile (FSEP) activities.
- update and maintain RTP regional documentation and databases.
- facilitate Program Status Review (PSR) meetings through scheduling, notification and reporting of minutes.
- design, program, test, and coordinate the implementation of headquarters RTP F&E budget software.
- convert and implement F&E staffing estimates.
- support the Automated Labor Distribution Reporting (LDR) System.
- assist in the preparation of budget submissions using the RTP.
- assist in developing a variety of reports (in Oracle) to users based upon existing RTP data.
- provide training packages and presentations concerning RTP design and use for hq. and field organizations.

C 3.11.4 COMPUTER AIDED ENGINEERING GRAPHICS (CAEG)

The Contractor shall also be required to support another functional subarea entitled Computer Aided Engineering Graphics (CAEG). The Contractor shall provide assistance and expertise in support of CAEG which will consist of assistance with the development and implementation of policy, plans, standards, orders, and guidelines that address the use of the CAEG system, as well as assistance with the operational aspects of a CAEG system. On-site customer support for CAEG will also be provided. The following are representative types of work efforts anticipated under the CAEG functional area, but are not all-inclusive. Exact work requirements will be identified within individual task orders.

- provide administrative and technical support to the CAEG Program Office as required.
- assist the CAEG Program Office in the development and implementation of policy, plans, standards, orders, and guidelines that address the use of the CAEG system
- assist in the testing, evaluation, integration, and installation of various off—the—shelf applications software and various in-house developed CAEG applications software as well as software upgrades and improvements thereto.
- assist the CAEG PO in the development of policies and conceptual as well as actual local implementation strategies governing new releases of CAEG software, hardware, user interface development and customization and specialized applications.
- provide coordination with all Offices of Primary Interest (OPIs) for the various CAEG applications to offer on-site customer support services in the form of establishing accounts, applications usage, adhoc and/or remedial training, troubleshooting, and in the development and/or enhancement and integration of Graphical User Interfaces (GUIs).
- conduct migration and software port studies for moving from the CAEG platform, graphics engine and Relational Database Management Systems to future platform(s) and other vendors software and, as determined by the FAA, assist in the implementation of the feasible alternatives.
- review and analyze technical papers relating to Computer Aided Design (CAD) and prepare comments and recommendations. Analysis and recommendations will extend to required design, performance and capacity improvements to the CAEG platform, LAN, and WAN.

- continue to develop and manage the local CAEG electronic database, backup and archive engineering drawings, as a minimum on a weekly basis, in accordance with the CAEG System Facility and Software Standards, and convert electronic files to those appropriate in support of CAEG customers.
- assist in the evaluating, implementing, and recording of changes to system configuration; maintain configuration control; and insure database security.
- provide system administration support to include as a minimum the assignment of user access IDs and privileges; the maintenance of the CAEG system on line disk space; the configuration of printer/plotter and other peripheral equipment; providing system access through CAEG LAN, AF LAN and the WAN; developing shell scripts to optimize operator and system performance; analyzing and troubleshooting system issues/problems and developing software workarounds; notification to the CAEG PO of system outages; and providing system availability, usage reports, and monthly inventories.
- install and integrate the various utilities to work with the CAEG and may include drawing and document management, computer-based instruction and on-line help features, database load and parsing utilities.
- assist in the development and integration of GUI to various CAEG applications and conduct demonstrations of the results.
- link and document personal computers and offer access capabilities to other remote computing devices to the CAEG LAN.
- continue development of local CAEG electronic databases to include any new data items such as the National Flight Data Center (NFDC) downloads and parsing thereof, Network Diagrams, equipment drawings, textual based information such as technical repair manuals, etc..
- provide CAEG scanning and drafting support.
- integrate improvements to the CAEG infrastructure (LAN/WAN) inasmuch as it supports CAEG connectivity.
- continue to implement the TCP/IP protocol on the national system and provide support to regional elements in order to maximize access to the CAEG database.

C 3.12 F&E PROGRAM MANAGEMENT SUPPORT

The Contractor shall be required to assist program offices in a variety of efforts pertaining to F&E program management, as well as provide financial management support to F&E program offices engaged in the transition, integration and implementation of NAS modernization projects. These efforts involve both specific and general aspects of program management support as well as the preparation, submittal, and execution of budgets across FAA F&E programs and projects, and providing assistance in the overall management of the budget process. Representative examples of the type of work efforts required under F&E Program Management Support are as follows, but are not intended to be all-inclusive. Additional types of work within the general scope of this functional work area may be required under individual task orders.

- assist in the development of draft PM Charters for various projects, including Special Programs.
- assist in the development of memorandum of agreement (MOA) and program directives.
- provide regional coordination on F&E issues.
- identify and report interdependencies among active and future CIP, OPS, and RE&D programs.
- develop and maintain a reference file database for CIP projects.
- assist in the development, coordination, and review of PIPs and assist in the generation of regional PIPs.
- provide support for various inter-office working groups.
- track action items for Program Control Meetings, provide presentation and conference support, and perform analysis and day to day coordination functions.
- provide various support to the regional Program Associate Managers.
- coordinate the F&E Refurbish Structures Program (RSP).

Within the financial management subarea, the Contractor shall be required to conduct tasks pertaining to preparation, submittal and execution of the F&E and RE&D budgets involving a variety of FAA F&E NAS modernization programs and projects such as the following, however, they are not intended to be all inclusive:

- assist in the performance of analysis and provide administrative support in preparation of budget items and participate in F&E and RE&D annual calls for estimates and budget submission.

- support external financial inquiries (such as DOT, OMB, GAO, and Congress) and prepare inputs to the FAA Office of Budget (ABU) and NAS Programming and Financial Management Division (ASD).
- track budget authorizations, commitments, obligations and remaining available balances at headquarters and regional levels for F&E and RE&D projects.
- review Project Authorizations (PAs), set up tracking and control programming, and update F&E Quarterly Financial Status Reviews (FSRs).
- support financial planning, attend management review meetings, and analyze, maintain, and expand construction cost estimates.
- design and maintain financial databases in direct support of various programs to ensure fiscal control of current funds, assist in planning future funding levels, and accumulate historical financial data.
- update information in the Departmental Accounting and Financial Information System (DAFIS) and Financial Management Subsystem (FMS).
- prepare program obligation profiles that portray planned and actual obligations.
- monitor implementation resources for AAF capital investment programs and develop alternatives to mitigate any identified shortfalls.
- provide financial management support for obligation planning, procurement planning, labor tracking, travel, and other expenses for F&E projects.
- verify that unliquidated obligations have been cleared.
- assist in writing justifications and funding requests/allocations.

C 3.13 MANAGEMENT SERVICES SUPPORT

C 3.13.1 GENERAL

In addition to performing work under the previous functional work areas, the Contractor shall provide a variety of management oversight to ensure the effective and efficient accomplishment of all requirements under the NISC-II contract, as detailed in this section of the statement of work, as well as within individual task orders, as deemed appropriate. Management oversight provided shall include task order management and program management. In addition, the Contractor shall ensure the proper integration and quality control of all work efforts performed by any team member or subcontractor to the prime contractor.

C 3.13.2 SUMMARY OF REQUIREMENTS

The Contractor shall establish a management organization in accordance with the requirements described herein using the best practices, policies, and procedures to ensure quality, timeliness, and efficiency in meeting contractual support requirements in an effective manner. The Contractor shall establish a program management organization responsible for the following:

- Planning, organizing, coordinating, and managing the activities required by the contract.
- Recruiting, supervising, and assigning personnel for performance of work that represents the most cost effective approach for meeting FAA requirements.
- Ensuring all personnel meet appropriate technical qualifications needed to perform work requirements specified in FAA task orders issued under NISC-II, and are available in a timely manner.
- Maintaining communications with FAA program management counterparts and appropriate FAA personnel, ensuring that applicable Contractor activities are fully coordinated.
- Establishing and maintaining adequate subcontract management oversight to monitor the efficient cost, schedule, and technical progress of subcontracted work and ensuring consistency of administrative procedures at the task order level (e.g., personnel practices, use of Govt. equipment, inclement weather days, etc.)
- Maintaining a high level of contract quality control including periodic reviews of technical competency by establishing and utilizing sufficient internal management controls and systems that provide early detection and correction of potential program and cost performance problems.
- Developing and following a security plan sufficient to safeguard Government information.

- Promoting policies and procedures that represent the most effective approach for meeting FAA requirements.
- Accumulating programmatic data, preparing reports, and responding to FAA inquiries regarding any and all aspects of the NISC-II Contract, as prescribed in individual task orders, and preparing and presenting bimonthly program status reviews to include:
  - Tracking the cost of resources incurred by individual NISC task orders by maintaining a financial database which serves as the central repository for all NISC financial data.
  - Preparing bimonthly Program Status Reviews
- Providing office space for NISC Program Office support personnel as deemed necessary by the FAA.
- Arranging for assorted training for NISC program management personnel as deemed appropriate and necessary by the FAA (e.g. Contracting Officer's Technical Representative (COTR) training.)
- Providing automation services for the FAA NISC Program Office in order to ensure the transfer and review of program data.

C 3.13.3 TASK ORDER MANAGEMENT

The Contractor shall provide expertise and assistance as required in order to facilitate task order management within the NISC program. The following are representative types of work efforts that can be expected within this area, however, they are not all inclusive. The exact work efforts required will be identified in individual task orders issued after contract award.

- Provide one-to-one interface with FAA Associate Technical Officers on all matters related to the routine cost, schedule, and technical performance of task orders.
- Recruit, hire, train and/or manage all NISC contractor personnel assigned to each task order. Ensure that administrative support and appropriate training are provided and that all citizenship requirements are met.
- Ensure prospective employees meet eligibility requirements as applicable (e.g., education, experience, citizenship, compliance with federal law) and submit required certifications to the CO.
- Monitor funds expended against each task order and maintain appropriate financial records pertaining to each task order.
- Coordinate and maintain travel records for all NISC employees; ensure that travel is not initiated unless it is approved by the appropriate FAA representative.
- Provide ATOs with activity reports which highlight all major work completed under each task order.
- If required by individual task orders, develop detailed task plans for each employee assigned.
- Track the amount of hours worked under each task order, within each of the functional area described in Part I, Section C of the NISC-II. Provide semi-annual summary to the program office.
- Ensure contractor employees comply with requirements with regard to the proper use and safeguarding of Government furnished property (GFP).
- Coordinate with ATO re: site security, site entry, and other Government provided workspace issues.
- Provide coordination to FAA ATO re: employee leave, work schedules, etc.
- Review FAA developed task orders, provide input, and participate in negotiations resulting in final task orders.

C 3.13.4 PROGRAM MANAGEMENT

The Contractor shall establish a formal program management organization that facilitates the accomplishment of program planning, program management, program control, and program execution to include:

- Designating the Contractor Program Manager as a single point of contact for the FAA NISC Program Manager.
- Establishing and maintaining close working relationships with the FAA program management office, the Contracting Officer, and other FAA staff managers who are directly associated with the NISC program.
- Providing leadership and direction to NISC contractor headquarters personnel and key field leads and to establish standard administrative policies and procedures across the NISC-II contract.
- Establish standard administrative policies and procedures across the NISC II contract**.**
- Advising NISC contractor personnel on policies, procedures, and issues.
- Performing Human Resource functions for NISC contractor personnel, including:

- Coordinating recruitment of personnel to fill authorized positions.
- Verifying that prospective employees meet employment eligibility requirements (labor category qualifications) and submit any required certifications to the Contracting Officer.
- On Award Fee task orders, submitting an Employee Concurrence form with resume to the cognizant ATO and NISC Program Manager for each candidate identified for employment under the NISC.
- Notifying the FAA NISC Program Office and ATOs of planned NISC personnel transfers and releases, including individual labor category changes as they occur.
- Request Contractor personnel security badges as necessary and appropriate.
- Developing, in coordination with the FAA PMO, and maintaining, a two-year rolling projection with underlying assumptions (currently assuming flat line projection) of the workload and staffing estimates for all current and projected NISC task orders and the providing of quarterly updates.

- Preparing and conducting Performance Evaluation Board presentations semi-annually, in accordance with Section H, Clauses H.12A AWARD FEE and H.12B INCENTIVE FEE, of the contract and the NISC Program Management Guide on specific dates, as scheduled by the FAA.
- Coordinating and planning orderly responses to emerging requirements and program changes.
- Identifying, on a continuing basis, any tasks, projects, etc., that will contribute to improved, more efficient management of the program.
- Assisting in developing and maintaining a complete inventory of Government furnished property.
- Assisting in the development of periodic updates to the employee's handbook and the program management guide.
- Providing employee indoctrination and training as deemed necessary.

In conjunction with the establishment of a formal program management organization, the Contractor shall prepare and submit the following plans described below. During the term of this contract, the Contractor is required to report proposed changes to the CO and seek concurrence from both the CO and FAA NISC Program Manager prior to making any changes to the below written plans.

Program Management (PM) Plan: The Contractor shall develop, implement, and maintain a PM plan that establishes an organization and operational environment that facilitates the successful accomplishment of program management functions designed to oversee and ensure the effective and efficient completion of all work efforts under this contract. The PM shall include, but not be limited to, the designation of a national program manager and staff; designation of regional program managers and staff; establishment of a formal organization responsible for business administration and technical activities required to perform work; the conduct of overall contract administration; the supervising, coordinating, and controlling of all work efforts; and the adherence to procedures for accurately invoicing all work efforts.

Subcontractor Management (SM) Plan: The Contractor shall develop, implement, and maintain a SM plan that describes in detail the process for the management of subcontractors during the course of NISC-II as required. The plan shall discuss how the Contractor proposes to distribute work to various subcontractors, the Contractor's plan to manage subcontractors in a seamless, task order environment, as well as prime contractor management practices designed to ensure subcontractors deliver the same high quality work effort expected of the prime. Subcontractor status reporting and invoicing procedures should also be addressed, along with prime contractor initiatives to enhance communications, reduce the likelihood of misunderstandings, and expeditiously resolve problems and disputes between itself and its subcontractors. Prime contractor should also discuss distribution procedures that allow deserving subcontractors to participate and share award fee earned by the NISC-II prime contractor.

Transition Plan: The Contractor shall develop and implement a transition plan designed to ensure a smooth, effective and efficient transition from the current NISC and ECARS Contractors to the follow-on NISC-II Contractor. The Contractor shall describe in detail an integrated, thoughtful, and effective approach for transitioning efforts from the existing contracts to the NISC-II. In addition, the Transition Plan must address and the Contractor be ready to accommodate new NISC-II work, outside any existing work currently being performed, that must commence prior to completion of the transition period due to personnel, schedule or other considerations.

C 3.13.5 PROGRAM MANAGEMENT PERSONNEL

The Contractor shall provide highly qualified program management personnel who meet or exceed all required qualifications contained within this contract. The Contractor, as a minimum requirement, shall provide the following full-time key personnel within the program management staff:

National Program Manager
Business Manager
Information Systems Manager
Human Resources Manager
Contract/Subcontracts Manager
Program Assessment Manager
Headquarters Operations Manager

Regional Task Order Managers
Eastern Region
Southern Region
Southwest Region
Western Pacific Region
Alaska Region
New England Region
Great Lakes Region
Northwest Mountain Region
Central Region
Aeronautical Center

Headquarters Task Order Managers
AEE/AFZ
ANI
ANS Omnibus (ANS 001)
ANS 261
ANS 500
ANS 600
AOP
ARS
ASR
ATX
AUA 200
AUA 300

See Section J, Attachment 1 LABOR CATEGORY DESCRIPTIONS, for minimum personnel qualifications of the above listed program management personnel. It is anticipated additional key personnel will be added during the NISC-II period of performance.

C 3.13.6 CONTRACTS MANAGEMENT

The Contractor shall provide appropriate contractual liaison and coordination with the FAA NISC Contracting Officer and NISC Program Manager to accomplish necessary contract administration functions. The accomplishment of all necessary contract administration functions by the prime contractor shall include the requirement that the prime contractor conduct all necessary liaison and oversight of all prime contractor team members or subcontractors.

C 3.13.7 COMMUNICATIONS AND COORDINATION

The Contractor shall coordinate with FAA program management on contract activities and ensure that each task order issued is planned, organized, and executed in an efficient and cost effective manner. The Contractor shall:

- Plan and coordinate the processing and performance monitoring of each task order assigned as prescribed within individual task orders.
- Keep the FAA NISC Program Manager informed of key decisions and actions affecting all operations of the NISC-II contract.

C 3.13.8 BUSINESS OPERATIONS

The Contractor shall maintain appropriate financial records to record all costs of performance under respective task orders. In addition, the Contractor shall be proactive and analyze invoices for known problem areas prior to submission to the FAA and shall provide substantiation in support of the invoices when requested by the Contracting Officer, Program Office, and ATOs.

The Contractor shall assist in the developing, maintaining, and reporting of contract performance metrics to be used in the post award management of this contract.

The Contractor shall prepare and provide the monthly Task Order Cost Report (Section G, Clause G.9 NISC-II TASK ORDER COST REPORT) and the NISC-II Status Report (Section G, Clause G.12 NISC-II STATUS REPORT) on a continuing basis, review their content and make recommendations to maximize program efficiency and effectiveness.

The Contractor shall maintain a system for monitoring subcontractors to ensure that all subcontracted work is performed in a professional, cost-effective manner and provide management interface with teammate companies. The Contractor shall also administer an award fee program for subcontractors applicable to work performance under the NISC-II contract. In addition, the Contractor shall monitor subcontractor administrative support and report any aberrant cost expenditures. The Contractor shall require that all subcontractor(s) employees performing work under this contract:

- meet the same technical standards as the prime contract.
- follow the code of conduct standards specified in the prime contract.
- properly account for Government furnished property.
- protect the nature of Government-furnished information.

C 3.13.9 INFORMATION AND TECHNOLOGY SYSTEMS

The Contractor shall support the implementation of various elements of the NISC Management Information System (MIS) to include personnel hiring and assignment tracking, resource planning, task order processing, cost and performance reporting, invoice preparation and reconciliation, action item tracking, and program issues monitoring. This MIS will be a combination of manual and automated processes designed to organize, standardize, and integrate NISC management functions. This effort shall be fully coordinated with the FAA PMO.

The Information System Manager will be the counterpart to the FAA focal point for NISC Systems. This individual will ensure that all contractor MIS activities are within the scope of work identified by this task order as further delineated in implementation plans submitted to the FAA prior to work initiation..

The Contractor shall coordinate with the PMO focal point in preparing an overall strategic plan for the development and implementation of a management information system for NISC to include:

- Surveying FAA contractor program management personnel and end users for their information management needs;
- Providing recommendations for hardware, software, and data management tools;
- Providing implementation plans including milestones for technical documents, software, and databases.

- As other elements of the MIS are started, the Contractor shall develop an implementation plan (including milestones) for each element and submit this implementation plan to the FAA focal point for NISC Systems prior to initiating any other work on the element.

The Contractor shall coordinate with the FAA PMO in assessing different technologies for managing work and the flow, storage, and retrieval of various types of program information. Technologies to be explored shall include, but not be limited to, groupware, imaging, electronic signatures, document management, and workflow.

The Contractor shall make interim deliveries of computer source code, documentation, printouts, database information, and status reports as required by the FAA PMO for NISC-II specific applications..

The Contractor shall ensure that all information in the MIS is timely, accurate, and accessible to both FAA and their Program Offices.

The Contractor shall comply with PMO provided programming standards including programming language, operating system environment, tools, and application interfaces. The Contractor shall ensure compatibility with FAA developed systems for automated exchange of information, as required.

The Contractor shall provide automation services for the NISC Program Office in order to ensure the transfer and review of program data.

C 3.13.10 SPACE REQUIREMENTS

The Contractor shall provide adequate office space and related office equipment such as computers, computer projection equipment, printers, telephones, facsimile machines, and LAN/WAN connectivity to Contractor and FAA support personnel associated with the NISC Program Office as required. This space shall be within 1/4-mile radius of the FAA Headquarters. Comparable space is defined as that amount of square footage that would be afforded to a Government employee of a comparable grade level as each contract individual engaged in support of the NISC program office. Space requirements shall also include providing a reasonable amount of conference room/ working space for a variety of NISC-II meetings as well as file storage space.

C 3.13.11 DELIVERABLES

The following is a summary of the deliverable requirements under this contract.

C 3.13.11.1 Program Management

Program Management Plan	To be submitted prior to contract award.
Subcontract Management Plan	To be submitted prior to contract award.
Transition Plan	To be submitted prior to contract award.
Employee Concurrence Forms w/resume	To be submitted and validated for qualifications by the cognizant ATO and NISC Program Manager prior to the candidate's anticipated start date
Trip Reports	Employee trip reports shall be furnished to the FAA NISC Program Manager within seven days after completion of each trip.
Key and Management Employee Leave Schedule	The Contractor shall provide the FAA Program Manager for NISC, on a biweekly basis, the leave schedule for key and management personnel.

C 3.13.11.2 Business Operations

Monthly Contract Status Reports as required by G.12 of the Contract to include graphics:	20 calendar days after the end of the month and at least five days prior to release of the monthly invoice.

Monthly Task Order Cost Status Report:	20 calendar days after the end of the month.
Inventory as of July 31 each year listing all Government furnished property:	Submit no later than September 15th of each year. Provide quarterly updates as required.

C 3.13.11.3 Systems

Program Statistics and Metrics: Program statistics and metrics are important means for the Contractor and the FAA to measure program performance and changes, as well as to determine cost, schedule, quality of work, and program issues that need attention. The FAA requires that the Contractor maintain a database of program data that is electronically available to both the contractor and FAA personnel on an as needed basis. Additionally, the Contractor shall be expected to produce regular monthly and quarterly reports that extract various data element from the program database. The program database would include the following data elements:

Individual Contractor Employees

- Start date with NISC/End date
- Years of Experience
- Employer (Company Name)
- Labor Category
- Labor Rate (fully loaded)
- Regular Hours Worked per Month
- Overtime Hours Worked per Month
- Functional Work Area (Hours worked per month)
- Task Order Assigned
- Geographic Location
- Office Space (FAA or Contractor Provided)
- Computer (FAA or Contractor Provided)
- Phone/Voice Mail System (FAA or Contractor Provided)
- Travel (Number of Trips, Total Cost, and Average Cost per trip)
- FAA Funding Source (Core/Non-core)
- Full or part-time status

Staffing

- Authorized by Task Orders
- On-Board
- Vacancies: Total and Aged (0-30,31-60, 61-90 and over 90 days)
- Attrition and Turnover
- Experience Profile
- Labor Category Profile

Teammate (Prime/Subcontractor) Allocations and Changes in Allocations

Relationship of Labor Rate Growth Per Teammate to Staffing Growth

Cost Data

- Fully Wrapped Labor Rates (Cumulative and Monthly Changes)
- Indirect Costs (rates and dollars by pool)
- General and Administrative Costs
- Other (than direct labor) Direct Costs (by item)

Task Order Utilization (Burn Rate)Verses Invoiced Amount: Hours and Dollars – Contract Level and Individual Task Orders

NISC Deliverables per Month (Early, On-time, Late) per Task Order

8 (a) and Small Business Participation

Although fairly comprehensive, this list of data elements should not be regarded as all-inclusive. Additions and deletions may be made to this listing by the FAA Program Manager for NISC.

C 3.13.12 RESOURCES REQUIRED

C 3.13.12.1 Direct Labor

The Contractor shall provide fully qualified staff within each required labor category, as well as the appropriate skill level within each labor category, to accomplish all requirements under this contract. Required labor categories, as well as appropriate skill levels within each labor category, **as deemed necessary and appropriate by the FAA**, will be delineated within each individual task order issued.

C 3.13.12.2 Other Resource Requirements

INFORMATION TECHNOLOGY:
The following general information technology guidelines are provided as a minimum regarding information technology to be acquired and provided to the Contractor's NISC-II employees under this contract. The exact technology baseline will be set as of the contract award date and periodic refreshments will be required as per Section H, Paragraph H-36 under Technology Refreshment. Also see Section H, Paragraph H-35 in the event special computing equipment is required to conduct NISC-II work efforts.

Equipment Environment - Microsoft Office Windows NT
Hardware:
- CPU (one per employee)
- 50% portable laptops with docking stations and 15-17" monitors - 133Mhz
- 50% desktop PCs with 15-17" monitors - 200 MHz
- CD ROM technology 8X
- Portable Storage features
- Backup Techniques
-Printers - laser jet technology - 1 printer for every 4 employees (on average)

Software Applications:
- Word Processing
- Spreadsheet Capability
- Budget/Financial Management Capability
- Mail Capability
- Scheduling Capability
- Graphics Capability
- Presentation Capability
- Browser Capability
- Data Base Management
- Virus Protection
- Utilities Capability

LAN Intranet Hook-Up
WAN Capability

TRAVEL:

Contractor personnel shall be required to travel for technical work coordination, on site data gathering, and informational meetings.

TRAINING:

The Contractor may be requested to provide and coordinate selected training courses, as deemed necessary and appropriate by the FAA, for various FAA program management personnel.

MISCELLANEOUS:

Includes items such as charges for Federal Express, purchase of minor administrative supplies, off-site meeting charges, etc.

C 4.0 GUIDANCE DOCUMENTS

The guidance documents, such as FAA and Department of Transportation (DOT) orders, standards, etc. are referenced throughout this contract using basic series numbers only. The work required within this contract shall be performed in accordance with the version of the document in effect at the time of the issuance of the task order.

C 5.0 ACRONYMS

Acronyms are contained in Section J, Attachment J.2.

C 6.0 PROGRAM MANAGEMENT SYSTEM (PMS) TOOLS

C 6.1 USE OF THE PMS TOOLS

The administration of the NAS system engineering and program management functions for the numerous projects comprising the FAA's Aviation System CIP depends upon a set of interrelated computerized tools designed to facilitate these functions. These tools are grouped under the title, PMS Tools, and are used by FAA and support contractor personnel. In the execution of the requirements of this Statement of Work, the Contractor shall review and determine the applicability of the existing FAA PMS Tools. In support of the regional office and Aeronautical Center, the NISC contractor shall update and enhance these tools to accomplish assigned tasks. For FAA headquarters applications, with the exception of the RTP, the maintenance, support, and modification of these PMS tools shall be provided by the FAA's System Engineering and Technical Assistance (SETA) contractor.

C 6.2 LISTING OF PMS TOOLS:

- Master Schedule System (MSS)
- Material Data Forecasting Module (MDFM)
- Documentation and Configuration Identification System (DOCCON)
- Configuration Management Status Accounting (CM/STAT)
- Cost Management Tool (CMT)
- Financial Management Subsystem (FMS)
- Project Status Review Board (PSRB)
- Engineering Database (EDB)
- Post Delivery Enhancement (PDE)
- NAS Development Planning Menu (NMENU)
- Regional Tracking Program (RTP)
- Terrain Data Analysis (TDA)
- Plan 100
- NAS Information System (NASI)
- Personnel Compensation and Benefits Forecasting Obligation Reporting System (PCB&T)

C 6.3 DESCRIPTION OF PMS TOOLS:

The following is a list and basic description of the PMS Tools:

Mainframe Scheduling Systems provide scheduling and database management applications in support of the CIP. The existing mainframe systems provide an electronic data repository, managed by a robust Database Management System (DBMS). This DBMS stores data regarding CIP Project schedules and materiel

deliveries, Air Route Traffic Control Center (ARTCC) schedules, and other FAA program activities. These systems also provide the capability to perform ad hoc scheduling and computations; real-time interactive and batch database transactions; processing of information derived from system databases; and other scheduling and database applications to facilitate the use of the available scheduling information. Furthermore, the existing system provides for interfaces between scheduling system databases and other FAA systems and software. A brief description of the current scheduling systems is provided below:

Master Scheduling System (MSS). The Master Scheduling System (MSS) is an on-line, interactive, ARTEMIS application. This menu-driven system identifies program activities and their interdependent relationships for individual projects within the CIP. The MSS uses critical path methodology, generates schedules, traces milestone activity, displays status information, and identifies schedule conflicts and interdependencies within and between projects. It also enables the user to develop special schedules and to assess how current schedules are affected by changes in delivery dates.

Two standard types of schedules can be prepared:

(1) Summary-level schedules covering development activity for the entire CIP; and

(2) Detailed schedules for individual projects.

The MSS accepts simple user commands to perform database updates and queries and to generate reports, charts, and plotted drawings. This system allows users to view data for CIP program milestones conveniently on the computer terminal screen.

Two subsystems of the MSS include:

Plan 100: The Plan 100 system is a generic planning tool for ARTEMIS users that assists in creating and maintaining critical path networks for CIP projects. Plan 100 was developed to take advantage of ARTEMIS application functions, to increase the efficiency of organizing and maintaining the planning database, and to provide additional productivity tools for planners. It is a user-friendly application that provides a database structure, standard calendars, tabular and plotter graphics reports, printed reports, and other utilities such as critical path analysis, resource-limited critical path scheduling, and calendar-based date calculations.

NAS Development Planning Menu (NMenu) is a menu-driven ARTEMIS application. The National Airspace System (NAS) development planning group created this system to increase productivity by automating scheduling tasks that are routinely performed each month. The primary menu for NMenu includes such options as Data Validation, Data Transfer, Barcharts, and Subcontractor Tracking. NMenu verifies the data in MSS and offers new automated processes to provide uniform procedures and output.

Material Delivery Forecasting Module (MDFM): The Material Delivery Forecasting Module (MDFM) is an ARTEMIS, interactive, relational database application system customized using the ARTEMIS 9000/EX software command language. The MDFM provides the Federal Aviation Administration (FAA) with automated forecasting and scheduling capabilities. These capabilities aid in the expansion and modernization of FAA facilities and provisioning for CIP equipment, and regionally generated, ongoing, and non-recurring facilities and equipment (F&E) projects, not covered under a specific CIP project.

MDFM delivery dates are based on planning schedules established by the CIP Program Manager. Data exchanged between the MDFM and individual regional project management systems allows program managers and their regional counterparts, or designated staff, to review the most current information and resolve any delivery schedule conflicts.

MDFM allows the FAA to compile CIP equipment delivery dates from individual project schedules maintained by separate planning organizations. The MDFM module is populated by project control personnel with additional information provided to MDFM through interaction with distributed FAA regional databases. The use of MDFM has expanded to provide delivery information for all major Headquarters-procured F&E projects.

The current mainframe scheduling systems will be migrated to LAN based client-server applications by the first quarter of 1997. The new applications will provide functionality equal to or greater than the current system, and additional capabilities including an open distributed database, cost analysis functions, and a Windows Graphical User Interface (GUI).

Cost Management Tool (CMT): The Cost Management Tool (CMT) is a RAMIS, on-line, interactive, menu-driven, database system application that consists of three subsystems used in cost control functions at FAA headquarters. These subsystems help management monitor and analyze progress and performance in three major financial areas, including appropriation, obligation, and cost performance. Each CMT subsystem is discussed below:

The Financial Management Subsystem (FMS) supplies data for the appropriations budgeting process. Information can be retrieved using either the CIP, the organization code, or the project code. The system has been designed to allow CIP and IPT managers to forecast and monitor the Facilities and Equipment (F&E) funds that have been appropriated through the Federal budget process. The types of data included are appropriations, authorizations, planned procurement actions, commitments, and obligations. Data can be reported by different time periods (i.e., day, month, quarter, and fiscal year) and by different types of aggregations (i.e., CIP Number, region/center, organization, and budget line item). Data is also extracted from the ABU Project Authorization (PA) Module and DAFIS. While the FMS was designed to handle both the F&E and Research, Engineering, and Development (RED) appropriations, the system has only been used to manage F&E appropriations.

The Project Status Review Board (PSRB) subsystem tracks monthly and quarterly planned obligations versus actual obligations on a monthly and quarterly basis. Users can monitor progress toward the agency obligation goals by using commitment data. This subsystem also enables users to develop a basic fiscal plan and can access historical data. This historical data can be used for trend analysis and future appropriations data to permit forecasting and cost escalation analysis.

The Personnel Compensation and Benefits Forecasting Obligation Reporting System (PCB Track or PCB&T) was developed for ASD-300 to provide an easy-to-use, comprehensive facility for projecting, tracking, and reporting personnel, compensation, and benefits information. PCB Track provides the following information:

(1) Improved staff productivity by replacing labor-intensive procedures;

(2) Integrated data -- data previously stored in several locations is now integrated into one flexible forecasting and obligation reporting tool;

(3) A state-of-the-art, Windows-based, supportable and maintainable PCB data management system for ASD.

PCB Track uses a single database containing several tables and interfaces with the FMS extract file. It also generates Excel spreadsheets and provides a query interface with Microsoft Access.

Engineering Database (EDB): The Engineering Database (EDB) is a RAMIS on-line, interactive, menu-driven application. It was developed to support the engineering community in system analysis, development, and integration tasks for the CIP. The system contains technical data including CIP requirements, systems elements and their components, system interfaces, and specific site data. The imbedded reporting tools are all menu driven, to provide a user-friendly application. In addition, on-line ad hoc reporting and editing capabilities make massive amounts of data easy to manipulate, as well as aid in the production of customized reports.

Documentation and Configuration Identification System (DOCCON) is a RAMIS on-line, interactive, hierarchical database system that identifies the configuration items of the CIP baseline. Configuration items tracked by DOCCON include facilities, hardware, software, firmware, and documentation. DOCCON also describes the interrelationships among these items. Each upper level component of the CIP hierarchy is linked by computer to the applicable lower level components. DOCCON is used to produce the automated NAS subsystem baseline configuration and documentation listing, and provides computer access to the current information on a particular configuration item. DOCCON also has an automated information request feature and **Document-Ordering** function.

Bibliographic information about documents, including the current version and historical versions, is stored by DOCCON and available on-line. The available information also includes the office of primary interest, the author of the document, the relevant baseline, and other card catalog information. Currently DOCCON

maintains 60,000 active documents. An additional 60,000 is archived to aid in historical data management. During active periods, DOCCON has processed more than 2,300 requests in one month.

DOCCON also provides access to **the Configuration Management Status Accounting (CM/STAT)** functions. These functions are used to process, schedule, review, and disposition changes to the CIP. Changes to the CIP are initiated by technical employee suggestions, engineering change requests, and case files. When appropriate, the status of these changes is stored as NAS Change Proposals (NCPs) that include applicable schedules, reviews, and configuration control decisions. Based on information provided by DOCCON, approved changes are tracked from their conception through their implementation.

Where direct computer access in not available, users can obtain information by calling the CIP Document Control Center (DCC). DCC Personnel will answer questions about DOCCON and the data available, and will produce ad hoc reports as requested.

The Post Delivery Enhancement (PDE) system is a RAMIS based tool available to the DOCCON Database Administrator and Data Administrator for tracking suggested changes to DOCCON. This tool records PDE number, planned and actual implementation dates, hours worked, as well as the actual change request. Output from the PDE is a report that is used by the DOCCON working group in its technical review of suggested changes to DOCCON.

System Change Request (SCR) is an interactive, menu-driven RAMIS database application that tracks changes suggested by the user community for the Program Management System (PMS) tool suite. The SCR also maintains the status of change requests through their initial suggestion, various reviews, and resource estimates. The functions of this system display the various sections of the FAA SCR form on line. Because the system is hosted on the CORN mainframe, it is available nationwide to all FAA employees who would like to suggest or track the status of suggested changes to the PMS tools. The system also presents a number of reports used by the CCB to track open and closed SCRs, and to create reports that facilitate decisions made by the FAA PMS Tools Change Control Board (CCB).

The Terrain Data Analysis (TDA) system uses 'small scale' ASCII digital elevation model tapes purchased from the US Geological Survey to depict the geographical contours of land between two given points within 100 miles of each other. The system is used primarily to determine obstacles to flight paths. The system uses RAMIS and FORTRAN, and is hosted on the CORN mainframe. The system requires the use of about 1000 tapes, and covers all 50 states. This system is not currently used, but it has not been officially deactivated.

***Regional Tracking Program (RTP*)** - The RTP gives regional facilities and equipment planners the capability to monitor NAS project schedules, resource availability, and costs. The RTP software allows the exchange of data between the host computer at the FAA headquarters and regional microcomputers, enabling users to enter data on the microcomputer and then transfer the data to the mainframe. RTP is also linked with the FAA's Departmental Accounting and Financial Information System (DAFIS), which allows users to analyze regional resources and budgets.

National Airspace Information (NASI) system provides an integrated suite of documentation and workflow management tools to aid FAA users in the dissemination of information. This system is available 21 hours per day 7 days per week with system backups occurring between 3:30 am and 6:30 am daily. An uninterruptible power supply ensures the system is able to handle power failures. The integrated suite of applications that are part of NASI include Interleaf to author documents, Interleaf RDM to process workflows, WorldView to view documents in a format that preserves page fidelity, and the Netscape Web Browser and Netscape Commerce Server to facilitate users in browsing available HTML documents that can be accessed via the World Wide Web. Two Sun servers support this system. One server hosts the Web and the other server hosts Interleaf RDM. An Oracle relational database management system (RDBMS) and a Solaris operating system are critical components of the NASI. Commercial off-the-shelf (COTS) applications have been customized to tailor attributes and workflows more applicable to the FAA, and to automate the production of WorldView documents. NASI provides point and click, hyperlink, and drag and drop features. The system is able to expand capabilities to handle an infinite number of documents on-line. NASI has been designed to receive information from a wide range of documents and document types including E-sized drawings, legal and standard-sized documents, and Faxes, cc:Mail messages and several different types of electronic file formats. Some of NASI's on-line Library holdings include products such as the Master Configuration Index (MCI), CIP,

RED Plan, Interface Requirements Documents (IRDs), and NAS-1000-series documents. NASI saves time and resources by providing FAA documents via an on-line library; automated document process workflows, including electronically routing documents to designated reviewers; an on-line annotation tool; automated document management for drafts, revisions, and related data; and secure access to both the Document Control and Workflow Management Tools via password protection and special access functions.

A more detailed description of specific attributes of the system are provided below:

On-Line Library Tool: NASI's On-Line Library Tool offers the capability to electronically view FAA documents through the World Wide Web (WWW), FAA Intranet, or NASI secure viewing options. In addition to full-text search capabilities, NASI provides two viewing formats: HTML, the standard Internet format, and Interleaf WorldView, an exact page for page, text and graphics format. WorldView allows multiple users to access entire documents electronically from their personal computer. This application stores electronic copies of documentation that is current and under configuration control of the organization maintaining the electronic files. Using WorldView, users do not need to manually search for valuable data. WorldView allows users to search a single document, or a group of documents, for a specified string of text; attach electronic notes to specific portions of the document; collect electronic notes for compilation to a single source for analysis; copy text from a WorldView document into other software packages including Microsoft Word, Excel, and WordPerfect; send electronic files to other destinations via electronic mail; and create active links to other applications that support the integrity of the documentation.

Document Control Tool: NASI's Document Control Tool manages the life cycle of a document. Authors can check out and excerpt portions of read-only documents to use in other documents, or check out existing document under their purview for revisions. Authors can also check their documents into the On-Line Library so that other users can view the documents. Once documents have been loaded into NASI for general access, authors maintain complete control over drafts, revisions, relationships, and archiving of the documents.

Workflow Management Tool: NASI's Workflow Management Tool automates document production processes using *workflows*. These predefined workflows enable users to electronically route documents to designated reviewers for on-line red-lining; receive electronic notifications to review documents; return red lines to an author; and participate in decisions to re-edit or publish a document.

C.6.4 COMPUTER ENVIRONMENT

The PMS Tools will be hosted on an IBM-compatible mainframe computer provided by the FAA. Microcomputer workstations are used throughout FAA Headquarters and the nine regions by FAA and contractor personnel in support of PMS functions. These workstations directly run certain PMS applications (e.g., the CBAS and risk analysis functions). The workstations are also used as terminals to access the mainframe-based tools.

The main data communications vehicle that provides remote users with access to the mainframe computers is the FAA Administrative Data Transmission Network (ADTN). The ADTN is a private packet switching network that is maintained for the FAA by a support contractor. The mainframe computer(s) hosting the PMS Tools will be connected directly to the ADTN via a network switching node. PMS Tool workstation connections consist of remote microcomputers or LANs connected to the ADTN via Packet Assembler/Disassembler (PAD) devices and further connected via TP4 network switching nodes.

End of Section C

This page has been left blank intentionally.